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STUDY OF NEWARK'S, NEW JERSEY, CENTRAL AREA

and

ITS ECONOMIC BASE

1st Phase

Jurkat

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NEWARK'S GEO-ECONOMIC POSITION AND FUNCTION

Actual present and potential future requirements of floor space in the Central Area of Newark are determined by the scale and structure of the economy in the New York Metropolitan Region which in turn are determined by the scale and industry structure of the Nation and the metropolitan complex extending along the Atlantic Sea Coast from Boston to Norfolk. The share in New York's regional economy obtained by the Central Area of Newark is dependent on the geographical portion of the region and the type of activities within this geographical portion in which Newark's influence is predominant, even outweighing that of Manhattan.

In this report Newark's area of influence is also referred to as the Metropolitan Area of Newark. Being part of the Metropolitan Region of New York it is quite obvious that Newark as a metropolitan center can not be expected to perform the functions of a regional center, and population and economic activity in Newark's area of influence will continue to turn for these functions to Manhattan. Metropolitan New York has grown to a size as well as national and international significance where its center - Manhattan - is more and more specializing in the services

requiring regional, national and international potentials and sub-centers are developing, specializing in services typically looked for in the central city of a metropolitan area. In this evolution the regional shopping center in contrast to the community and neighborhood shopping center has been accepted as a natural development. In the same fashion in which consumers turn to a regional shopping center instead of to Manhattan, business concerns are satisfied and prefer to meet their average needs for other than purely local services in conveniently located central districts and to use the facilities offered by Manhattan only for high quality performance of an extraordinary nature for which the needs are comparatively infrequent and irregular and the cost of distance justifiable. Although the input-output relationships in this structure greatly resemble the relationships of metropolitan areas which are satellites to a metropolitan area having the status of a center of an economic region

they are not quite of the same historical order. Newark was a satellite prior to its full integration into the New York Metropolitan Region. It continues to be fully integrated, but with the increase in horizontal and vertical dimension and compactness of the metropolitan region it assumes new functions in a new stage of intra-metropolitan division of labor commensurate with a heretofore unexperienced magnitude and quality of a complex like New York.

The Newark Metropolitan Area

The Newark Metropolitan Area has been defined by determining the break-even lines of influence of Newark, on the one hand, and Manhattan, Paterson, Wilkes-Barre, Allentown-Bethlehem, Philadelphia, Trenton and Atlantic City, on the other hand. In this determination gravitation formulas were used with population, retail sales and employment in wholesale trade, finance, insurance and real estate, business services and professional services as the independent variables. The distances of the break-even line from Newark are shown in Table 1 and the counties and minor civil divisions or portions thereof inside the boundaries of the break-even line are listed in Table 2.

It is of great significance that Newark's pre-dominance is more extended in western than in northern direction. Although high rates of growth for population and economic activity during the recent past have directed general attention to Union, Middlesex, and

Somerset Counties, Newark's future economic base will be more determined by the prospects of growth in Somerset and Morris Counties. These prospects are closely related to the growth pattern in the super-metropolis extending from Boston to Norfolk. In this complex the same tendencies in the distribution of increments of population and economic activity have prevailed and will continue to prevail as have been observed in individual metropolitan areas. The peak of growth rates has been shifting more and more away from the center. It has been passing through the Baltimore Region during recent years and is reaching the Norfolk Region. While its geographical progress has been mainly in southern direction it has reached distances from the center - which is New York - which will place the area composing the western fringe of the super-metropolis in a favorable competitive position and particularly those inland areas which are close to New York and Philadelphia and Baltimore. As a result of this shift in geographical emphasis metropolitan

areas like Allentown-Bethlehem, Lancaster and York have already experienced accelerations in their rates of increase. Similar accelerations can be observed for the counties west of Essex and Union Counties.

Metropolitan Newark has an area of approximately 980 square miles and a population of approximately 2,180,000 people. It exceeds the population of the St. Louis Standard Metropolitan Area within geographical confines less than half the size of the St. Louis SMA. The greater compactness in metropolitan Newark results in greater proximity to the center and hence a greater potential for the center.

Of the total metropolitan population 20.7% reside in sub-sections having their center of gravity within a three-mile radius from central Newark; 55.1% in sub-sections centered within a radius of 4 to 11 miles; and 24.2% in sub-sections centered in a radius of more than 11 miles. However, in appraising the implications of distance of population from the center allowance has to be made for reduction in travel speeds due to unusual density.

Employment in the Metropolitan Area of Newark is estimated at approximately 800,000 workers. This estimate is actually for the five counties Essex, Union, Middlesex, Somerset and Morris for 1956 (in contrast to the population estimates which are for the metropolitan area proper in 1957). Considering, on the one hand, that the totality of the five counties extends beyond the boundaries of the Metropolitan Area and, on the other hand, that the portions of metropolitan Newark located in Hudson and Bergen Counties are omitted, employment in the Metropolitan Area may even have exceeded 800,000. Of the total employment (in the five counties) 43% is in manufacturing; 16% in other goods-handling industries as transportation, wholesaling with stock, construction, etc.; 15% in business services including such functions as finance, insurance and real estate, wholesaling without stock, business services proper and professional services mainly extended to business; 17% in retail trade and consumer services mostly rendered through stores; and the remainder other consumer services including hotels, private households, amusement and

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recreation, medical and health services and education.

TABLE 1

LIST OF PLACES AT WHICH NUMARK'S ATTRACTION IS NOT KNOWN
SITUATED IN NEW YORK

In the direction of: New York, N. Y.....4.7 miles
 Paterson, N. J.....11.0 "
 Newton, N. J.....21.0 "
 Trowburg (Morristown, N. J.)..32.0 "
 Clintonville, Pa.....29.0 "
 Flemington, N. J.....30.0 "
 Princeton, N. J.....26.0 "
 Perth Amboy, Br. hold, N. J.....23.0 "

COUNTIES AND INCORPORATED DIVISIONS INCLUDED IN AREA
 IN WHICH NEWARK'S ATTENTION IS PRIMARILY FOCUSED
 CLARK COUNTY, NEW JERSEY

Bergen County

- (1) Newark
- (2) Belleville
 - Nutley
 - Blumenfield
 - Glen Ridge
 - Montclair
 - Cedar Grove
 - Verona
 - Free Hills
 - Caldwell (both parts)
 - North Caldwell
 - West Caldwell
- (3) East Orange
 - Orange
 - West Orange
 - Roseland
 - Livingston
- (4) Irvington
 - South Orange
 - Maplewood
 - Millburn

Hudson County

Kearny
 East Newark
 Harrison

Passaic County

North Arlington

Passaic County

Clifton (southern half)
 Little Falls

Table 2 (continued)

- (1) Elizabeth
 Linden
 Hillside
 Union
 Kessler
 Roselle Park

- (2) Remainder

Middlesex County

- (1) All civil divisions above the Raritan River
- (2) New Brunswick
 Hilltown
 North Brunswick
 East Brunswick, except southern portion
 South River
 Sayreville
 South Amboy
- (3) Northern half of Madison

Monmouth County

- Metuchen (town and borough)
- Keyport
- Union Beach
- Marlton
- Kearnsburg
- Atlantic Highlands
- Highlands
- Middletown (northern half)
- Holmdel (northern half)

Harris County

- (1) Mountville (southern half)
 Beonton
 Mountain Lakes
 Denville
 Rockaway
 Passaic
 Harding
 Morris
 Morristown
 Morris Plains

Table 2 (continued)

Harris County (cont.)

- (1) Perrispany-Troy
~~Florham Park~~
 Florham Park
 Madison
 Chatham (town and borough)
- (2) Dover
 Mine Hill
 Roxbury (southern portion below Mt. Arlington;
 Mount Olive (southeastern half, excl. Budd Lake)
 Chester (town and borough)
 Randolph
 Mendham (town and borough)
 Victory Gardens

Somerset County

- (1) Warren
~~Berardo~~
- (4) Bernardsville 568
 Far Hills
 Peapack Gladstone
 Bedminster
- (3) Acme Brook
 South Bound Brook
 Bridgewater
 Manville
 Somerville
 Raritan
 Millstone
 Franklin, northern portion (more than half)
 Hillsborough, northeastern portion (more than half)
 Branchburg, northern portion (more than half)

Table 2

1940-1975

County or city	1940	1960	1977	1975
<u>Ssex County</u>				
(1)	429,760	432,776	451,100	563,410
(2)	16,867	195,948	230,760	290,440
(3)	137,852	157,933	180,390	239,397
(4)	103,861	114,192	121,400	88,754
Hudson, t.	55,911	55,615	55,523	44,330
Merriden, t.	9,904	15,970	19,970	25,700
Wasson, t.	29,782	16,661	46,344	65,120
<u>Union</u>				
(1)	230,569	237,690	256,830	248,246
(2)	127,775	160,443	209,300	309,754
<u>Middlesex</u>				
(1)	129,003	156,488	190,227	311,140
(2)	75,387	90,698	107,587	209,292
Wrentham, t.	27,701	40,307	52,146	116,450
<u>Morris</u>				
(1)	66,439	86,148	116,509	275,729
(2)	21,129	26,726	34,599	67,910
<u>Somerset</u>				
(1)	6,631	10,303	15,438	36,708
(2)	6,439	7,658	7,000	20,748
(3)	41,318	51,588	63,400	99,636
(4)	12,307	15,739	16,800	28,956
TOTAL	1,648,375	1,900,488	2,178,203	3,056,420

SURVEY AREA
FUNCTIONAL
BY FUNCTIONAL AREA

<u>FUNCTIONAL AREA</u>	<u>1950</u>	<u>1953</u>	<u>PERCENT INCREASE</u>
<u>Total</u>	<u>28,477</u>	<u>29,974</u>	<u>5.4</u>
<u>Core</u>	<u>1,066</u>	<u>1,954</u>	<u>33.3</u>
<u>Belt</u>	<u>21,431</u>	<u>28,020</u>	<u>30.9</u>
A	195	730	317.1
B	6,367	7,641	20.0
C	1,861	2,629	41.3
D	4,346	5,126	12.7
E	3,143	5,609	1.2
F	2,193	2,208	.7
G	2,759	3,367	22.0
H	363	620	70.8

Table 4

NORTHERN NEW JERSEY
EMPLOYMENT 1956
BY MAJOR FUNCTION AND COUNTY

<u>County</u>	<u>Total</u>	<u>Agric- ulture</u>	<u>Manufactur- ing</u>	<u>Other Goods- Handling</u>	<u>Stores^A</u>	<u>Finance, Insurance, Real Estate</u>
Essex	400,975	322	145,449	67,926	73,872	35,493
Union	184,290	418	93,188	24,992	31,218	5,197
Middlesex	125,407	207	69,637	18,886	17,672	2,344
Somerset	33,118	174	16,483	4,796	5,259	519
Morris	55,540	219	21,361	7,863	11,048	1,785
Five Counties	799,330	1,340	346,118	124,463	139,069	45,338
Hudson	268,876	78	145,297	48,895	37,287	8,354
Bergen	276,040	405	95,041	105,139	37,384	5,610
Passaic	221,541	127	83,883	85,104	27,127	5,492
Total	766,457	610	324,261	239,038	101,788	19,656

<u>County</u>	<u>Other Bus. Serv. & Gov.</u>	<u>Hotels</u>	<u>Amuse- & Recrea- tion</u>	<u>Medical Health</u>	<u>Educa- tion</u>	<u>Private Households</u>
Essex	41,170	1,890	1,561	5,816	13,438	14,038
Union	16,589	476	775	1,948	4,292	5,197
Middlesex	8,878	220	365	1,075	4,191	1,932
Somerset	2,817	130	148	353	1,033	1,406
Morris	7,616	227	196	876	1,810	2,469
Five Counties	77,070	2,943	3,045	10,068	24,834	25,042
Hudson	18,955	394	475	1,583	5,055	2,303
Bergen	18,941	-	948	2,181	6,332	6,119
Passaic	10,791	265	460	1,740	2,327	3,225
Total	46,687	659	1,883	5,304	14,714	11,647

^{/1} Including Consumer Services rendered in stores and shops

Future Population and Employment in the New York Metropolitan Area

Estimates of future population have been derived from projections of employment as well as on a more purely demographic basis.

The projections of future employment were obtained on the basis of methods which in turn on which past employment was projected to present employment - and in the application on a number of other metropolitan areas have proven to be greatly efficient. These methods which have been combined into an overall design are

- (a) a trend forecast of employment in manufacturing
- (b) analysis and projections of variations in input-output relationships with employment size in individual industry segments and
- (c) a model establishing relationships between accelerations and decelerations of growth particularly in the central district-type service industries and employment size, total and in specific industries, and distances to other metropolitan centers.

fluctuations in manufacturing employment have been
reflected in the loss of national productivity,
and in the productivity component in particular and
national trends in manufacturing employment. The analysis
is based on the experience between 1899 and 1954.
The projections are comparatively conservative in their
assumptions on future national population and labor force
the increase expecting a population of only 235 million
in 1980).

The projections of manufacturing employment
were developed for four geographical levels:

- a) for the States of New York and New Jersey
- b) the New York Standard Metropolitan Area
- c) the New York and New Jersey portions of New York SM
- d) the counties in the New Jersey portion of the New
York SM.

They isolate among others the movement due to the short-range
and long-range cycle in economic activity and reveal that a
negative trend prevailing for the states of New Jersey and
New York before the late 1920's turned into and has continued

as a positive trend since that period. It has been projected as a positive trend, however, with a decline in rates of increase.

The projections for the Northern New Jersey counties were based on an analysis of the relationships between population density and employment in manufacturing per square mile of land area in 1939 and 1954 and the rates of increase in population density as well as manufacturing employment per square mile at different levels of density - and, in addition, distance from the center of gravity of the Economic Region. The basic data used in this analysis are presented in Table IV. The nature of the relationships could be easily defined in terms of a regression line with an upper limit. It was found that so far only Essex County has become saturated in terms of population density and is rapidly approaching a stage of saturation in manufacturing employment. Essex County will not be saturated in either regard prior to 1975 and 1980 respectively.

For the derivation of employment size from input-output relationships among industry sectors a preliminary assumption of future population is required as a basis for projecting employment in industries selling consumer goods and services, and also, for projecting the portion of workers in industries employed to supply the consumer goods and service industries. Such an assumption of future population is greatly facilitated once manufacturing employment is projected and by taking trends in relationships between manufacturing and population into account. A final estimate is then arrived at in the process of estimating employment by industry sector. This final estimate was found to be in good agreement with population forecasts developed under the direction of Henry Cohen - now Senior Management Consultant in the Office of the Mayor of the City of New York - for various uses, last not least for use in the Metropolitan Transit Project conducted by the Regional Plan Association Inc. of New York for the Port of New York Authority.

The population projected for all of the northern New Jersey counties included in the New York Standard Metropolitan Area and for the five counties immediately surrounding the New York Metropolitan Area was distributed by sub-area on the basis of a model of the relationships between distribution of population density and growth. This model was developed for the period 1940 to 1970, thus covering the entirety of the effective automobile age and projected to 1975. It is distinguished from similar models developed for a number of other metropolitan areas by showing from the very beginning two distinct phases of growth, one occurring in the density range of 1500 to 2500 persons per square mile, and the other at the lowest density range experienced in the area. While the latter peak continues to stay with the lowest densities the former has moved toward relatively higher densities in the course of time and is anticipated to have reached the city of Newark between the present and 1975. Our forecast of the future distribution of population in the Newark Metropolitan Area therefore provides for an

increase rather than a decrease of population in the City of Newark in general and its more central portions in particular. Interestingly enough an analysis of recent changes in population based on housing stock indicates a population increase between 1950 and 1957 of as much as 33% in the central area of Newark which is the study area of this project.

The projections of employment by industry and population by sub-area are shown in tables 4, and 5.

1939 and 1954

<u>County</u> <u>Year</u>	<u>Square Mile</u>	<u>Employees in Mfg.</u> <u>per Square Mile</u>
Morris, 1939	208	10
Somerset, 1939	208	25
Somerset, 1954	364	91
Morris, 1954	410	38
Middlesex, 1939	67	144
Middlesex, 1954	1,060	213
Passaic, 1939	1,512	350
Passaic, 1954	1,898	373
Bergen, 1939	1,017	147
Bergen, 1954	2,005	252
Union, 1939	2,940	418
Union, 1954	4,270	788
Essex, 1939	6,510	785
Essex, 1954	7,350	1,120
Hudson, 1939	14,580	2,485
Hudson, 1954	14,170	2,960

TABLE 5

WEEKLY PERSONAL INCOME TAXES IN N. C. BY COUNTY
1973

County	Total	Manufacturing	Other Goods Handicrafts ^{1/}	Auto Repair	Retail Trade	Personal Services ^{2/}	Recreation	Medical
Ashe	477,175	183,000	78,600	3,400	68,000	11,800	1,700	6,300
Bacon	295,106	158,300	40,400	1,300	37,000	6,000	1,100	2,700
Beaufort	295,527	132,300	122,000	2,700	35,000	3,000	1,000	2,300
Bert	95,400	39,000	10,100	400	10,000	1,000	300	700
Bibb	164,657	72,300	27,300	600	22,000	1,900	400	1,900
Bladen	1,306,964	584,300	277,900	8,400	172,000	23,700	4,500	13,900
Bolton	267,138	150,000	48,600	1,100	27,000	6,800	400	1,400
Burke	355,595	114,300	131,300	800	51,000	5,900	1,400	3,300
Catawba	151,664	80,300	17,300	300	28,000	5,700	600	2,200
	Education	Hotels	Private House- holds		Wholesale Trade With- out stocks	Finance, Insurance Real Estate	Other Business Services	
Ashe	14,700	2,100	15,200		1,975	42,300	45,300	
Bacon	5,900	1,300	7,100		1,096	8,300	26,500	
Beaufort	9,000	500	4,100		227	13,100	49,300	
Bert	2,200	300	2,000		709	1,200	6,000	
Bibb	4,100	900	5,300		157	5,400	23,100	
Bladen	15,900	4,400	34,600		4,164	70,300	153,200	
Bolton	4,500	400	2,100		638	8,500	18,100	
Burke	9,600	-	9,300		995	7,100	20,900	
Catawba	4,100	300	4,000		664	1,600	2,900	

1/ including automobile repair and retail trade.

2/ including private households.

Scale and Structure of Economic Activity in the Newark Central Area

It is estimated that 9019 non-residential establishments are located in the central portion of the city of Newark which has been defined as the study area of this project, that these establishments use almost 35 million square feet of floor space and employ almost 122,000 workers (including self employed). These figures have been developed through tabulation from the telephone directory listing subscribers in the order of their location, from the data collected under the direction of the City Planning Officer (particularly the information on building class, building area, number of stories and land value) and on the basis of typical ratios between floor space and workers in a central district and surrounding belt established by Marketers Research Service during recent years.

Of the total non-residential establishments about 21% belong to manufacturing and other goods-handling industries, over 27% to retail trade and consumer services and almost 52% to

business services including finance, insurance and real estate, wholesaling with stocks, etc. (see above). Compared with similar central areas studied in Philadelphia, St. Louis, Baltimore and York (PRN) the Newark central area is in terms of establishments comparatively weak in goodshandling and comparatively strong in business services. While the share of goodshandling approaches that in Baltimore and York, if floor space is considered, that of business services continues to hold a dominant lead over the shares of business services in Philadelphia, St. Louis, Baltimore and York. Retail and consumer services are on the basis of floor space almost as strong as in St. Louis and stronger than in Philadelphia, however, fall behind Baltimore and York. It might be assumed that the dominance of business services is solely due to the presence of headquarters offices of large insurance companies. However, even if the blocks in which these headquarters concentrate are deducted the lead of business services is only slightly diminished, manufacturing assumes an even more normal share and retail trade and consumer services remain at least relatively as strong as in Philadelphia.

Comparison has been made between the size of the New York and St. Louis metropolitan areas. Continuing this comparison we find almost identity in non-residential floor space per person in the central areas of the two cities, however, since the population in the New York metropolitan area is larger than in the St. Louis one New York has a lower ratio of floor space per capita of the metropolitan population than St. Louis (2.5 against 2.6). In this differential is reflected the fact that New York's Metropolitan area represents a sub-structure of the New York Metropolitan region whereas St. Louis is the central city in an economic region of its own.

Future requirements for non-residential floor space in the central area of New York will be determined by the functions this area will be called upon to perform within the New York metropolitan economy and as a link between this economy and the economies in the other portions of the Metropolitan region of New York and those of other economic regions. A proper understanding of the present functional structure of central areas in general and

of the Newark Central Area in particular therefore is the most pertinent approach to predicting the future.

When analyzing the distribution by industry of establishments, employment and floor space in the Central Area of Newark it becomes quite obvious that the Study Area includes the Central District proper and portions of the high density belt of population and employment typically surrounding a central district. In its non-residential segments the Belt is characterized by a predominance of the godeshandling functions, particularly manufacturing, warehousing and transportation in general and trucking-warehousing in particular. It represents a natural habitat for the smaller manufacturing establishments in industries with better than average productivity and it is likely to attract more establishments in this class in the future than it did in the past. The greater share of manufacturing in floor space than in number of establishments indicates that the industrial land use pattern in the Central Area has not yet adjusted itself to the scale, function and character of the present day Central District which ~~functions~~ are typically

those of a large business center of a large metropolitan area. The removal of the larger plants to outlying locations and their replacement by smaller plants of at least equal or higher productivity and at the same time greater specialization must therefore be expected and provided for. Table 6 shows that almost eight million or 70% of all non-residential floor space in the Belt is devoted to the handling of goods and that this handling of goods employs 78% of all workers.

Of course, the land use pattern is not uniform throughout the Belt. Goodehandling in manufacturing and related industries is at least in one area superseded by retail trade and in another area by occupiers of office space. In order to obtain a better concept of its functional structure the Belt has been divided into eight sub-areas. Of particular interest for the Central District proper is the sub-area along the waterfront and New Jersey Railroad Avenue identified as A. Of the industrial establishments in this section almost 27% of the establishments

manufacture metal products, machinery and electronic equipment and appliances, almost 19% jewelry and findings, almost 10% paper and printing products and over 13% apparel. In addition, more than 10% are wholesaling and transportation establishments.

In contrast to the Belt the area that must be identified with the Central District proper has only 7.5% of its floor space devoted to industrial use and approximately 10% of the workers engaged in the goods handling activity. In fact, non-goods handling functions have a high worker to floor space ratio.

The Central District proper - also referred to in the following as Core - requires more than twice as much non-estimated floor space as the Belt and employs three and a half times as many workers.

The two primary space users and employers in the Core are the occupiers of office space, particularly business services, and retail trade. A third important space user and employer is government. These three major

functions occur in significant concentrations reflecting the major functional structure of the Core in geographical terms. The occupiers of office space (including bank space) can be further broken down into two classes. The business services of a rather small establishment size, high quality and productivity employing only relatively few people on the clerical level and the big offices as, for instance, the headquarters of insurance companies already referred to. The following functional areas are distinguished accordingly.

- A. Intensive Business Services
- B. Other Intensive Offices and Hotels
- C. Intensive Retailing
- E. Government
- D. and F. All others

The "All Other" group has in turn been broken down in order to distinguish between those industries directly participating in the performance of primary central district functions and those servicing the primary performers of

central district function. All areas of concentration of performers of primary central district functions except government have been consolidated as the Primary Core Area, all other areas as the Secondary Core Area. Floor space in the Primary Core is almost twice as large as in the Secondary Core, and employment more than twice as large.

Core and Belt and the functional areas of the Primary and Secondary core are not only differentiated according to the kinds of industries predominant in them but also as space users proper, i.e. in terms of the ratio of floor space, workers and value added to land area. The following table shows the first two types of ratios for the Belt and all levels of functional areas in the Core and the third type of ratio for the totals of Core and Belt.

Non-Residential Floor Space, Workers and
Value Added per Acre Of Land Area 71
1947 Dollars 1947

<u>Functional Area</u>	<u>Floor Space</u> <u>(Sq. Ft.)</u>	<u>Workers</u>	<u>Value Added</u> <u>(000 1947 Dollars)</u>
Central Area, Total	47,003	164	1,394
Care	110,574	407	3,565
Primary	134,830	577	
A. Intensive Business Services	214,935	847	
B. Other Intensive Offices & Hotels	230,783	930	
C. Intensive Retailing	100,000	911	
D. Remainder	16,956	551	
Secondary			
E. All Others	83,052	235	
Salt, Total	23,094	34	655

71 Excluding Government and Parks

Value added represents the market value in terms of 1947 dollars of the product and services of the workers employed in the particular establishments of the particular functional areas for which they are identified. The sum total of values added which can also be referred to as business income represents the Gross Product of the Core and Belt of the Newark Central Area defined as the Study Area. It corresponds in concept and procedures of measurement to the sum total of value added or business income computed as the Gross National Product by the U.S. Department of Commerce. Table 9 shows the absolute dollar figures for Value Added for the Core and the eight Belt areas broken down by major function. The gross product of the Core is larger than in comparable central districts again reflecting the great emphasis on business services in the structure of the Newark Central District.

TABLE 6

NEWARK - NUMBER OF BUSINESS ESTABLISHMENTS
IN DEVELOPMENT AREA

	total	/1	belt
Manufacturing & Construction.....	1,970	480	470
Goods handling.....	85	13	33
Retail trade.....	1,546	900	726
Business & repair services.....	1,527	1,181	535
Consumer services.....	919	494	425
Miscellaneous services.....	751	377	104
TOTAL.....	7,588	2,965	1,963
Manufacturing & Other goods handling	1,050	111	1,123
7	21.02	12.76	37.90
Retail & Consumer services	1,045	1,174	1,151
7	27.11	21.37	38.85
Business, repair & Miscellaneous serv.	1,575	1,179	339
7	51.87	65.87	23.25
TOTAL..... %	100.0	100.0	100.0

/1 Excluding CPC blocks 64 and 65 which in this table are included in the belt.

TABLE 7

SUNBELT AREA

Piedmont, Inc.

ESTIMATED 1960 USE TYPE

Functional Area	Home	Office Build.	^{/1} Store	^{/2} Industrial	All Others	Total non- residential.	Vacant	Residential Space
Total	41,157	16,917	5,551	5,543	3,051	14,945	23	6,136
Core	26,086	16,047	4,544	1,775	1,583	13,733	21	337
A Intensive Bus. Serv.	3,603	3,254	1	42	117	3,595	1	
B Other Int. Offices & Hotels	6,781	5,869	5	296	15	5,569		134
C Intensive Retailing	4,619	838	3,341	217	76	4,477	5	142
D Remainder	799		484	236	5	753		46
^{/3} Primary	15,741	5,550	2,945	798	635	15,394	13	320
E Government	4,420	4,420				4,420		
F All Others	3,944	1,667	377	977	898	3,919	8	17
Secondary	8,364	6,087	377	977	898	8,339	8	17
Salt	17,668	870	1,109	7,768	1,468	11,215	4	6,449
A	1,371	17	9	1,120	193	1,339		33
B	3,573		39	1,841	44	1,924	3	1,546
C	3,088	154	105	1,639	475	2,423		585
D	1,946	113	45	396	15	571		1,375
E	2,632	490	39	205	337	1,071		1,581
F	1,509	84	102	604	265	1,057		452
G	1,126		15	463		480		646
H	2,482	8	755	1,448	139	2,350	1	131

^{/1} Including gasoline Service Stations^{/2} Including Commercial Garages^{/3} Conjectural Estimate

TABLE 7-a
SURVEY AREA
PASADENA CORP.
BY FUNCTIONAL AREA AND LAND USE TYPE

<u>Functional Area</u>	<u>Total</u>	<u>Office Bank</u>	<u>Stores</u>	<u>Industrial</u>	<u>All Others</u>
<u>Total</u>	<u>121,950</u>	<u>69,232</u>	<u>17,878</u>	<u>32,364</u>	<u>4,136</u>
<u>Core</u>	<u>96,573</u>	<u>55,457</u>	<u>16,786</u>	<u>9,351</u>	<u>3,054</u>
A. Intensive Business Services	14,159	13,663	133	199	224
B. Other Intensive Offices & Hotels	26,702	25,793	336	732	466
C. Intensive Retailing	29,373	3,514	17,088	5,506	185
D. Remainder	2,443	-	1,369	579	-
<u>Primary</u>	<u>55,817</u>	<u>42,682</u>	<u>15,728</u>	<u>5,912</u>	<u>555</u>
E. Government/ ¹	15,350	15,350	-	-	-
F. Others	13,511	7,455	1,458	2,399	2,199
<u>Secondary</u>	<u>28,861</u>	<u>22,805</u>	<u>1,458</u>	<u>2,399</u>	<u>2,199</u>
<u>Belt</u>	<u>27,272</u>	<u>3,745</u>	<u>1,092</u>	<u>21,353</u>	<u>1,082</u>
A	3,301	106	17	3,110	61
B	5,219	97	5,106	16	-
C	5,880	683	259	4,614	322
D	1,721	479	115	1,097	30
E	2,830	2,050	100	641	119
F	2,469	378	259	1,417	415
G	1,321	-	33	1,286	-
H	4,251	47	191	4,013	-

¹/1 Conjectural estimate

TABLE 8

ACTIVITY	
Manufacturing and Construction	
Food and Tobacco	1.5
Textiles	.5
Wood	13.5
Furniture and fixtures	1.7
Paper and Printing	12.6
Chemicals	1.5
Metals	5.0
Machinery	1.5
Electronic Equipment & Instruments	1.2
Jewelry and findings	1.5
All Other	10.4
Wholesaling	
Transportation	1.5

TABLE 9

SURVEY, R&I
VILLE ANNEXED
BY FUNCTIONAL AREA AND LAND USE TYPE
IN THOUSANDS OF 1947 DOLLARS

Functional Area	Total	Office Job	Store	Industrial	All Other
Total	62,505	37,003	64,750	336,127	15,669
County	364,102	430,133	56,700	56,487	10,700
State	318,463	27,678	6,256	279,640	4,889
	43,660	1,274	118	43,634	642
	57,204		844	56,213	147
	72,149	5,392	1,458	63,671	1,628
	19,049	3,334	621	14,933	161
	20,566	14,250	540	7,655	1,123
	28,376	2,862	1,417	23,121	976
	17,400		206	17,284	
	54,959	566	1,052	53,129	212

Potential For Future Central Area Floor Space
And Employment in Newark

Disregarding the prospects for future floor space supply and for solving the traffic and transportation problems in their present and even greater future complexity it can be expected that the potential for non-residential floor space in the Central Area of Newark in 1975 will exceed present floor space requirements by 7.8 million square feet. If this potential can be realized Central Area floor space requirements will increase from 35 million square feet to 43 million square feet or by over 22 percent. Most of this increase will occur in office (including bank) space to which 6.2 million square feet will be added. The second largest increase will occur in industrial space (manufacturing, warehousing, transportation) to which 1.5 million square feet will be added. The space for the directly consumer oriented industries would remain about the same with stores adding 350,000 square feet to their

present size and the non-store functions losing about 300,000 square feet.

Assuming that the present functional area pattern would be maintained the Core would gain 6.7 million square feet or 28 percent, the Belt one million square feet or 10 percent; the primary core 5.7 million square feet or 37 percent; and the secondary core one million square feet or 12 percent. The increase in industrial space will almost entirely occur in the Belt.

However, the actual distribution of future floor space by functional area will be determined by the design of the physical planners which by implication will also determine the distribution of value generation by non-residential activity and the maximum limit and differentiation of floor space and land values per area unit.

Future employment in the Central Area will be in line with the increase in floor space requirements.

If the floor space potential is realized employment will rise from its present level of 122,000 to 150,000 workers. It will increase in the Core from 95,000 to 117,000 workers and in the Belt from 27,000 to almost 33,000.

The projections of future Central Area potential are based on the increases projected for the Newark Metropolitan Area in population and employment differentiated by 13 industry classes. In computing the percentages of activity in these industry classes that will seek Central Area locations allowance has been made for the future geographical distribution and particularly distances from the Core of the population and industries that will represent the market potential for central district-type functions.

The forecasts of potentials for the Central Area are shown in greater detail in Tables 10 and 11.

TABLE 20
SURVEY AREA
FLACK SPACE, 1975
BY FUNCTIONAL AREA AND LAND USE TYPE
(000 Sq. Ft.)

<u>Functional Area</u>	<u>Total</u>	<u>Office Bank</u>	<u>Store</u>	<u>Industrial</u>	<u>All Other</u>
<u>Total</u>	<u>42,792</u>	<u>23,100</u>	<u>5,778</u>	<u>11,110</u>	<u>2,744</u>
<u>Cong</u>	<u>30,429</u>	<u>21,808</u>	<u>3,069</u>	<u>1,863</u>	<u>1,687</u>
A. Intensive Business Services	3,341	4,870	80	53	299
B. Other Intensive Offices & Hotels	9,517	8,770	61	311	375
C. Intensive Retailing	5,480	1,233	3,918	228	81
D. Remainder	850	-	567	248	35
<u>Primary</u>	<u>31,088</u>	<u>14,893</u>	<u>4,626</u>	<u>830</u>	<u>730</u>
E. Government	4,420	4,420	-	-	-
F. Other	4,921	2,493	443	1,026	957
<u>Secondary</u>	<u>9,341</u>	<u>6,915</u>	<u>443</u>	<u>1,026</u>	<u>957</u>
<u>Boil</u>	<u>12,303</u>	<u>1,292</u>	<u>709</u>	<u>9,245</u>	<u>1,057</u>
A	1,427	32	4	1,320	71
B	2,363	-	64	2,183	16
C	2,719	233	167	1,998	381
D	721	168	82	467	4
E	1,159	715	71	244	129
F	1,580	130	176	783	491
G	561	-	18	542	1
H	1,873	14	127	1,708	24

TABLE 11

SURVEY AREA
WORKERS, 1975
BY FUNCTIONAL AREA AND LAND USE TYPE

<u>Functional Area</u>	<u>Total</u>	<u>Office Bank</u>	<u>Stores</u>	<u>Industrial</u>	<u>All Other</u>
<u>Total</u>	<u>149,127</u>	<u>93,425</u>	<u>20,580</u>	<u>30,292</u>	<u>4,830</u>
<u>Core</u>	<u>116,549</u>	<u>87,803</u>	<u>19,835</u>	<u>5,257</u>	<u>3,648</u>
A. Intensive Business Services	21,275	20,298	313	147	517
B. Other Intensive Offices & Hotels	35,480	36,553	239	977	811
C. Intensive Retailing	21,372	5,223	15,331	643	175
D. Remainder	2,994	-	2,219	699	76
<u>Primary</u>	<u>54,121</u>	<u>62,074</u>	<u>15,102</u>	<u>2,366</u>	<u>1,579</u>
E. Government	15,350	15,350	-	-	-
F. Other	17,077	10,384	1,733	2,891	2,069
<u>Secondary</u>	<u>32,427</u>	<u>25,734</u>	<u>1,733</u>	<u>2,891</u>	<u>2,069</u>
<u>Belit</u>	<u>32,579</u>	<u>5,617</u>	<u>745</u>	<u>25,035</u>	<u>1,182</u>
A	3,797	136	4	3,575	79
B	5,997	-	67	5,912	18
C	6,958	1,013	175	5,411	359
D	2,085	790	86	1,265	4
E	3,988	3,108	75	661	144
F	3,419	563	185	2,120	549
G	1,489	-	19	1,468	2
H	4,846	62	124	4,623	27

